OBSERVATIONS OF CANNIBALISM AND PREY RECORDS IN THE DUGITE OR SPOTTED BROWN SNAKE *(PSEUDONAJA AFFINIS AFFINIS)*

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True cannibalism in snakes whereby a species actively subdues and swallows a conspecific is rarely observed in the wild. It is usually an artefact of confinement in captivity where accidental predation is commonly observed and documented for captive snakes (Hoser 1993). Greer 1997 provides an overview of true cannibalism in Australian elapids that includes only a single species of brown snake, the Eastern Brown Snake, *Pseudonaja textilis*. Similar to *P. textilis*, the mainland population of *P. affinis* is a large (up to 2 metres) opportunistic foraging hunter displaying a strong predilection for disturbed habitats such as industrial areas, golf courses, road verges etc. in close association with agricultural development (Shine 1989).

Maryan and Bush (1996) provided a summary of all available literature on prey in *P. affinis*. This note describes two separate observations of true cannibalism in the Perth metropolitan area and additional prey records that include birds, mammals and other reptiles.

On 4 October 2004, BM received a phone call in the afternoon from a resident in Wanneroo (31°45' S, 115°48' E) that an adult *P. affinis* was subduing another snake and attempting to swallow it in their front garden. The identification of the snake being consumed was unknown to the residents. Upon BM's arrival ca 30 minutes later, the unidentified snake was determined as another *P. affinis*, which was by this time almost completely swallowed. The residents informed BM that the commotion from the birds drew their attention to the writhing snakes, and that the initial struggle was the most time consuming period lasting up to 40 minutes. Once the aggressor had subdued the other snake it drew it out length wise to commence swallowing from the head. The well-vegetated garden made photography difficult and unfortunately the deceased snake was regurgitated in the hoop bag after capture. Both snakes were similarly sized in length (ca 1.1 metres) and girth, and sexed as males.

The other event occurred on 23

January 2005 at another residence in Wattle Grove (32º02' S, 116º00' E). A single adult 1.5 metre *P. affinis* was observed active between 2–3pm along a corrugated iron fence beside the driveway. Suddenly it very quickly turned in the opposite direction to pursue and grab another adult dugite of lesser size, resulting in a writhing battle with multiple bites being delivered by both snakes. This lasted approximately 10 minutes until the larger individual finally dragged the other snake to a more sheltered location to commence consumption (Figure 1). The sex of the snakes was not determined.

Pseudonaja affinis has been opportunistically observed feeding on a wide variety of prey items (Maryan and Bush 1996) including aviary birds such as quails, mammals such as the Southern Brown Bandicoot (*Isoodon obesulus*) and other reptiles like the Bobtail (*Tiliqua rugosa*), Ornate Dragon (*Ctenophorus ornatus*) and Bardick (*Echiopsis curta*). Other birds recorded as prey in aviary situations include canaries, budgerigars, and various species of small doves, pigeons and parrots and an incident of a dugite killing a large pheasant without making any attempt to swallow the bird. Many of these incidents involving birds as prey items may initially be due to the attraction of exotic mice in and around the aviary (Maryan and Bush 1996), however the variety of birds consumed that include

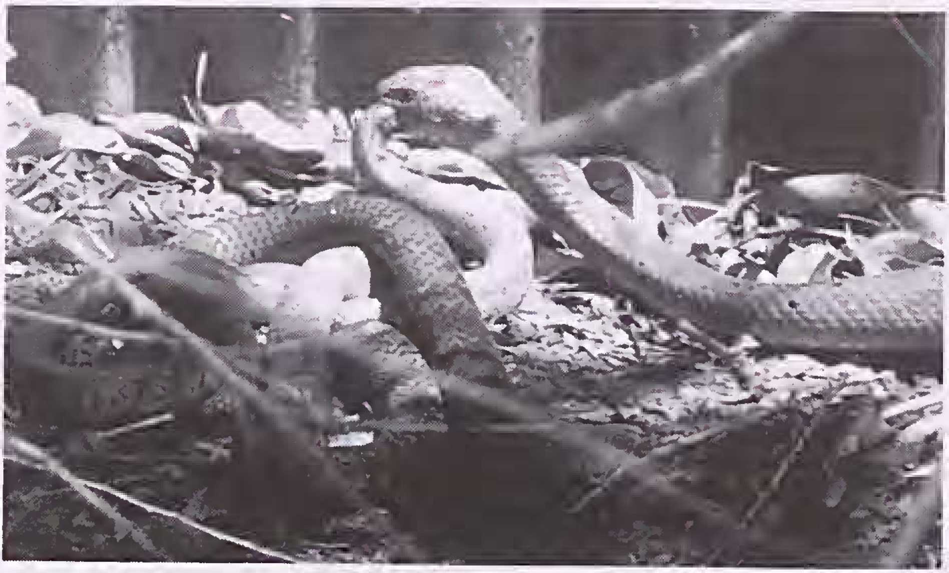

Figure 1. Dugite beginning to swallow another Dugite at Wattle Grove on 23 January 2005. Photo: Zack West.

swift flying parrots, underlines the degree of opportunism in a situation where a reptilian predator can consume trapped prey. We have observed *P. affinis* on several occasions unable to exit or appear to be reluctant to leave an aviary due to gorging itself on caged birds. In addition to the introduced rodents (House Mouse *Mus musculus* and *Rattus* spp.) that constitute the majority of prey items recorded in *P. affinis* (Shine 1989), we have also recorded a small European Rabbit *(Oryctolagus cuniculus)* being eaten by an adult dugite during a snake removal call.

Chapman (1999) provides details of a *P. affinis* subduing and swallowing a Tiger Snake *(Notechis scutatus)* with the entire sequence recorded on colour print film. Another incident of a 80cm *P. affinis* eating a 60cm *N. scutatus* has been observed in the Darling Range at Wungong Dam (32º13' S, 116º04' E), however it is possible that the tiger snake was a road victim as the observation took place beside a vehicle track and it had a large open body wound. The opportunistic nature of this large elapid is truly highlighted with an observation of 150cm male *P. affinis* attempting to eat an Oblong Turtle *(Chelodina oblonga)* in a horse paddock at Wattle Grove. The dugite had eaten the head and neck but obviously the 30cm carapace prevented it from further consumption eventually resulting in regurgitation after capture. It is not known whether the turtle was alive when first encountered by the snake.

The combination of size, foraging habits and abundance in human disturbed areas of *P. affinis* ensures this species of elapid is regularly sighted in the Perth suburbs. The successful and recent adaptation of *P. affinis* to a highly modified environment, the beneficial role it plays in the control of exotic rodents and a very generalised diet including its own kind, make this species an interesting biological case study that has been highlighted for its eastern counterpart *P. textilis* (Whitaker and Shine 2003).

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